

REMARKS

Claim Rejections

Claims 17 and 19 are rejected under 35 U.S.C. § 102(e) as being anticipated by Kang et al. (U.S. 6,582,616). Claims 1, 4, 5, 9, 12 and 13 are rejected under 35 U.S.C. § 102(e) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being obvious over Kang et al. Claims 3, 6-8, 11, 14-16, 18 and 20 are rejected under 35 U.S.C. § 103(a) as being obvious over Kang et al. Claims 2 and 10 are rejected under 35 U.S.C. § 103(a) as being obvious over Kang et al. in view of claims 1 and 9, and further in view of Wolf et al.

Drawings

It is noted that the Examiner has accepted the drawings as originally filed with this application.

Claim Amendments

By this Amendment, Applicant has canceled claims 2, 10 and 17-20, and amended claims 1 and 9 of this application. It is believed that the amended claims specifically set forth each element of Applicant's invention in full compliance with 35 U.S.C. § 112, and define subject matter that is patentably distinguishable over the cited prior art, taken individually or in combination.

The primary reference to Kang et al. teaches a plurality of printed circuit boards having an inner hole for mounting a semiconductor chip and a conductor circuit. However, Kang et al. does not teach the details of forming a metal layer in the slots. Whereas, in the present invention, the anti-etch layer (80) is a photosensitive dry film and hermetically seals the slot in the dies-cavity portion (65) thereby protecting the metal layer in the slot during the etching step.

Kang et al. do not teach forming an anti-etching layer on the top surface and the bottom surface of the substrate and the die-cavity portion hermetically sealing the through slot; nor do Kang et al. teach the anti-etching layer located on the top surface and the bottom surface of the substrate and hermetically sealing the through slot, the anti-etching layer being a photosensitive dry film.

It is axiomatic in U.S. patent law that, in order for a reference to anticipate a claimed structure, it must clearly disclose each and every feature of the claimed structure. Applicant submits that it is abundantly clear, as discussed above, that Kang et al. do not disclose each and every feature of Applicant's amended claims and, therefore, could not possibly anticipate these claims under 35 U.S.C. § 102. Absent a specific showing of these features, Kang et al. cannot be said to anticipate any of Applicant's amended claims under 35 U.S.C. § 102.

The secondary reference to Wolf et al. is cited for teaching the use of a photosensitive dry film.

Wolf et al. do not teach forming an anti-etching layer on the top surface and the bottom surface of the substrate and the die-cavity portion hermetically sealing the through slot; nor do Wolf et al. teach the anti-etching layer located on the top surface and the bottom surface of the substrate and hermetically sealing the through slot, the anti-etching layer being a photosensitive dry film.

Even if the teachings of Kang et al. and Wolf et al. were combined, as suggested by the Examiner, the resultant combination does not suggest: forming an anti-etching layer on the top surface and the bottom surface of the substrate and the die-cavity portion hermetically sealing the through slot; nor does the combination suggest the anti-etching layer located on the top surface and the bottom surface of the substrate and hermetically sealing the through slot, the anti-etching layer being a photosensitive dry film.

It is a basic principle of U.S. patent law that it is improper to arbitrarily pick and choose prior art patents and combine selected portions of the selected patents on the basis of Applicant's disclosure to create a hypothetical combination which allegedly renders a claim obvious, unless there is some direction in the selected prior art patents to combine the selected teachings in a manner so as to negate the patentability of the claimed subject matter. This principle was enunciated over 40 years ago by the Court of Customs and Patent Appeals in In re Rothermel and Waddell, 125 USPQ 328 (CCPA 1960) wherein the court stated, at page 331:

The examiner and the board in rejecting the appealed claims did so by what appears to us to be a piecemeal reconstruction of the prior art patents in the light of appellants' disclosure. ... It is easy now to

attribute to this prior art the knowledge which was first made available by appellants and then to assume that it would have been obvious to one having the ordinary skill in the art to make these suggested reconstructions. While such a reconstruction of the art may be an alluring way to rationalize a rejection of the claims, it is not the type of rejection which the statute authorizes.

The same conclusion was later reached by the Court of Appeals for the Federal Circuit in Orthopedic Equipment Company Inc. v. United States, 217 USPQ 193 (Fed.Cir. 1983). In that decision, the court stated, at page 199:

As has been previously explained, the available art shows each of the elements of the claims in suit. Armed with this information, would it then be non-obvious to this person of ordinary skill in the art to coordinate these elements in the same manner as the claims in suit? The difficulty which attaches to all honest attempts to answer this question can be attributed to the strong temptation to rely on hindsight while undertaking this evaluation. It is wrong to use the patent in suit as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claims in suit. Monday morning quarterbacking is quite improper when resolving the question of non-obviousness in a court of law.

In In re Geiger, 2 USPQ2d, 1276 (Fed.Cir. 1987) the court stated, at page 1278:

We agree with appellant that the PTO has failed to establish a *prima facie* case of obviousness. Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching suggestion or incentive supporting the combination.

Applicant submits that there is not the slightest suggestion in either Kang et al. or Wolf et al. that their respective teachings may be combined as suggested by the Examiner. Case law is clear that, absent any such teaching or suggestion in the prior art, such a combination cannot be made under 35 U.S.C. § 103.

Neither Kang et al. and Wolf et al. disclose, or suggest a modification of their specifically disclosed structures that would lead one having ordinary skill in the art to arrive at Applicant's claimed structure. Applicant hereby respectfully submits that no combination of the cited prior art renders obvious Applicant's amended claims.

Summary

In view of the foregoing amendments and remarks, Applicant submits that this application is now in condition for allowance and such action is respectfully requested. Should any points remain in issue, which the Examiner feels could best be resolved by either a personal or a telephone interview, it is urged that Applicant's local attorney be contacted at the exchange listed below.

Respectfully submitted,

Date: November 16, 2005

By:


Bruce H. Troxell
Reg. No. 26,592

TROXELL LAW OFFICE PLLC
5205 Leesburg Pike, Suite 1404
Falls Church, Virginia 22041
Telephone: 703 575-2711
Telefax: 703 575-2707